

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF HAWAI'I

NATIONAL ASSOCIATION FOR
GUN RIGHTS; RONDELLE AYAU;
JEFFREY BRYANT,

Plaintiffs,

v.

ANNE E. LOPEZ, in her official
capacity as Attorney General for the
State of Hawai'i,

Defendant.

Civil No. 1:22-cv-404-DKW-RT

DECLARATION OF RYAN BUSSE

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I, Ryan Busse, declare under penalty of perjury that the following is true and correct:

1. I am a former senior executive in the firearms industry and the author of *Gunfight: My Battle Against the Industry that Radicalized America* (New York: PublicAffairs, 2021).

2. This declaration is based on my personal knowledge and experience, and if I am called to testify as a witness, I could and would testify competently to the truth of the matters discussed in this declaration.

EXHIBIT "2"

BACKGROUND AND QUALIFICATIONS

3. I was raised with firearms as an integral part of my life. I began shooting with various guns as a young boy and continued to regularly use and study guns throughout my life (I am now 52). After graduating college, I entered the firearms industry in 1992. I became a sales executive in the firearms industry in 1995, and I spent more than 25 years in this role. While in the industry, I developed innovative sales teams, maintained relationships with the largest national retailers, and was responsible for worldwide sales of millions of firearms. I built a dealer-direct sales network that included more than 2500 firearms dealers including locations in all 50 states, and I regularly visited these dealers. In my job, I also studied and built sales programs that relied on understanding the technical nature of most firearms available in the U.S. market, including AR platform guns and other types of rifles and pistols. During my career, I played an integral role in building one of the largest firearms companies in the United States, Kimber, and I was nominated by shooting industry leadership many times for the SHOT Business “Shooting Industry Person of the Year” Award. I served in an executive sales capacity as Vice President of Sales until August 2020. While in the industry I served as an advisor to the United States Senate Sportsmen’s Caucus, and as the North American board chairman for Backcountry Hunters & Anglers, a national wildlife conservation and hunting organization.

4. A copy of my curriculum vitae is attached to this declaration as

Exhibit A.

5. I left the firearms industry because I was concerned about what I believed to be irresponsible and dangerous marketing and sales practices. Since I left, I have served as an advisor to the 2020 Biden presidential campaign, I have testified twice before the U.S. Congress about the firearms industry and gun policy (before the House Committee on Oversight and Reform and the Joint Economic Committee, respectively), I have been called to testify in closed-door briefings at the U.S. Senate, and I currently serve as a Senior Advisor to Giffords. I remain a proud and active gun owner, outdoorsman, and advocate for responsible gun ownership.

6. I have provided expert witness testimony in *Miller v. Bonta*, No. 3:19-cv-01536-BEN-JLB (S.D. Cal.); *Duncan v. Bonta*, No. 3:17-cv-1017-BEN-JLB (S.D. Cal.); *Oregon Firearms Federation Inc. v. State of Oregon*, No. 2:22-cv-01815-IM (D. Or.); *Brumback v. Ferguson*, No. 1:22-cv-03093-MKD (E.D. Wash.); and *National Association for Gun Rights v. City of Highland Park, Illinois*, No. 1:22-cv-04774 (N.D. Ill.).

7. I have been retained by the Department of the Attorney General, State of Hawaii to provide expert testimony in litigation challenging Hawaii's assault pistol and large capacity magazine regulations. I am being compensated at a rate

of \$350 per hour for my work on this declaration, as well as for any travel or testimony connected with this matter, and at \$150 per hour for any consultation work.

OPINIONS

8. I have reviewed the pertinent Hawaii law which regulates the sale of assault pistols and large capacity magazines, and I am familiar with the features and function of both.

9. With regards to opinions I offer below pertaining to the features and characteristics of assault weapons, I focus on features addressed in the Hawaii law that are also generally found on most such weapons regardless of platform. I pay particular attention to AR-15 platform firearms because firearms based on this particular platform are now by far the most prevalent assault pistols and assault rifles in the United States and are therefore particularly illustrative of the issues in this case.

10. Semiautomatic pistols, rifles and shotguns, including AR and AK-platform pistols and rifles, are capable of firing one shot per each pull of the trigger. Centerfire firearms are chambered with centerfire ammunition, which has the primer (the component that ignites the propellant) located in the center of the base of the cartridge case (as opposed to the rim of the cartridge). Today's modern rimfire ammunition is almost always confined to small and less powerful

cartridges, such as the .22LR. Bullets fired from these cartridges are small and light and move much slower than almost all centerfire rifle ammunition. Rimfire chamberings are common in youth and “beginner” hunting rifles because they are relatively quiet and inexpensive and have low recoil. Conversely, modern centerfire ammunition requires a detonation of a primer in the center of the cartridge (CENTERfire) and these cartridges are generally much more powerful than rimfire cartridges. As an example, the .223, which is the most common AR-15 cartridge, fires bullets at more than 3000 feet/second, whereas a rimfire cartridge typically propels bullets at around 1100 feet/second. This increased centerfire velocity greatly increases the range and lethality of centerfire cartridges. Most handgun cartridges are also now centerfire, and these cartridges generally fire bullets much larger than rimfire cartridges, usually at velocities of between 800 and 1500 feet/second. Generally, centerfire weapons fire higher-caliber ammunition and/or fire it at higher velocities.

11. While there are many assault pistol variants, AR-15 pistols are now the most commonly sold assault pistol in the United States, and are near direct copies of AR-15 rifles with two notable exceptions; First, these guns incorporate a barrel shorter than 16 inches which means the gun in rifle form would be deemed illegal under the 1934 NFA which regulates “SBRs” or “Short Barreled Rifles.” Second, they have no rear stock (the portion of a rifle used to stabilize the firearms

against a shoulder while firing). The absence of a stock is purposeful because this is the feature that designates the gun as a rifle. Generally speaking most all AR-15 pistols now manufactured and sold incorporate a system on the rear of the gun to allow easy attachment of what in effect becomes a “stock replacement.” Even though there is now a concerted gun industry effort to publicly label these guns as “pistols” in order to imply compliance with the federal regulation, inside the industry, these guns are considered to be “shortened AR-15s” because they are shortened AR-15 rifles.

12. These guns are now generally sold and marketed as a smaller, more portable and more versatile version of the AR-15. Notable gun industry website Guns.com enumerates the advantages of AR-15 pistols like this: “The AR pistol has the advantage of being more concealable and maneuverable in tight spaces. That, coupled with a large round capacity, make it a great choice in close-quarter encounters.”¹ Once the pistols are outfitted with braces or other similar accessories, they can be fired as a pistol, as a “braced” pistol (the attachment clamps to or braces against the forearm of the shooter to “stabilize” the gun) or can be deployed in near-identical fashions to rifles.

¹ Review of AR-15s: <https://www.guns.com/news/reviews/ar-pistol-vs-ar-rifle-what-should-you-pick> (last visited Feb 9, 2023)

13. This is a photo of a non-braced AR-15 pistol being shot without a brace but with the aid of a “sling.”



This is a photo of an AR-15 pistol equipped with an arm brace:



This is a photograph instructing shooters how to shoot an AR-15 **pistol**. The AR-15 pistol in the photo is also equipped with an angled forward grip (Angled grips

legal, vertical grips are deemed illegal by NFA regulations). This is from a notable industry training site, The Firearms Training Blog:²



This is a photo from a notable industry site, Wing Tactical. The photo is meant to instruct shooters how to shoot an AR-15 **rifle** equipped with vertical forward grip (similar to the angled grip on the AR-15 pistol in the preceding photo). Note that the shooter, stance, aiming and grip are nearly identical to the AR-15 pistol above³:

² Photo from Firearms Training Blog:
<https://mckinneyfirearmstraining.com/wordpress/ar-15-pistol/> (Last viewed Feb 1, 2023)

³ Wing Tactical instruction on how to fire AR-15 rifle with forward grip.
<https://www.wingtactical.com/blog/how-to-properly-use-a-fore-grip/> (last viewed Feb 1, 2023)



14. The AR-platform, in particular, is the civilian version of the military's select-fire M-16 and M-4 rifles, which are capable of fully automatic or burst firing. Based on my familiarity with the firearms industry, AR-platform rifles and similar semiautomatic rifles did not begin to sell in significant numbers until the late 2000s and particularly after the 2012 shooting at Sandy Hook Elementary in Newtown, Connecticut.

15. Because of years of self-imposed gun industry resistance to marketing these guns, related years of lingering industry doubts as to the legality of AR-15 pistols equipped with braces or similar accessories with regards to the NFA regulations, and because assault pistols are relatively difficult to fire accurately without a stock or stabilizing device, the pistol version of the AR-15 has been much slower to gain industry acceptance and popularity. It is my experience that these guns have only been openly discussed, marketed and sold by reputable companies in any meaningful volume since about 2016, with the majority of sales happening in the last 2-3 years (2020-2023).

16. Less than a decade ago most companies did not market AR-15 pistols. Most companies that market AR-15 pistols today introduced them very recently. A notable example is Smith and Wesson that introduced their Military and Police AR-15 pistol in Dec, of 2020.⁴

17. The AR-platform is highly modular, enabling owners to customize their rifles with a variety of interchangeable components. Some components of a firearm, such as a trigger mechanism or barrel, are integral to its operation, and the firearm will not function properly without them. But the particular components which qualify a weapon as an assault pistol under Hawaii law if it is equipped with them, are not integral to the basic operation of any firearm and are not necessary to use a firearm effectively for self-defense or sporting purposes, such as hunting. I address some of these features in the following points.

A. Features of assault weapons which apply to both assault rifles and assault pistols

18. **Pistol grip.** Pistol grips beneath the action of a rifle or shotgun are not necessary to operate those weapons as designed. For AR-15 pistols, this feature is a more integral part of the gun until the stock or brace is attached, after which the gun becomes nearly identical to an AR-15 rifle. In my experience, most

⁴ Introductory review of Smith and Wesson AR-15 pistol from Dec of 2020. <https://www.thefirearmblog.com/blog/2020/12/10/smith-wesson-introduces-new-mp15-pistol/> (last viewed Feb 1, 2023)

AR-15s pistols are equipped by their owner with a brace or similar “stock.” A pistol grip is a feature incorporated into some firearm stocks or as a piece separate from the stock, that allows the shooter to control and aim the weapon during periods of rapid fire. For many decades, non-pistol grip stock designs have been standard on firearms such as Remington 870 shotguns, which are widely accepted to be among the most effective home defense guns ever built and which have been leading sellers in the firearms market. Even on AR-15s and similar rifles, stocks that do not incorporate this feature are currently sold in states such as California, and prominent, widely referenced firearms authorities on these topics, such as www.caligunner.com, assess those options and the function of these “compliant” (non-pistol grip) rifles in this manner: “Everyone has a preference on what looks the ‘best’ but the top picks below are *all great functioning options*.”⁵ As also noted on that website, while “[s]ome people that are critical of the featureless option complain of the aesthetics of the available options,” “the overall function of the rifle is mostly maintained,” and “several companies continue to innovate and provide new products that look decent and perform well considering the constraints of the law.” While a pistol grip beneath the action of an AR-15 may be useful during military operations because it helps the shooter stabilize the weapon and

⁵ <https://caligunner.com/california-compliant-featureless-rifle/> (last visited Dec. 30, 2022).

reduce muzzle rise during rapid fire, a pistol grip is not necessary to operate a firearm safely in lawful self-defense situations.

19. Forward Grip, Foregrip, Protruding Grip, or Second Handgrip.

Held by the non-trigger hand, this feature is designed to aid in firearm stabilization during the rapid firing of assault rifles and assault pistols. The feature first gained prominence inside special operations military units where “cluttering” from accessories and extreme heat generated from the rapid firing of rifles were problems for troops in wartime situations. This feature is also found on some assault pistols, which are generally shortened versions of assault rifles and are therefore more difficult to stabilize during rapid fire. This feature allows the shooter of these pistols to better control the muzzle during firing. These grips can also aid in rifle stabilization during magazine changes thereby reducing time to reload for some shooters. A concise description of the feature’s first official origin on assault rifles is found in this firearms industry review from Lucky Gunner: “One of the items issued in this kit was a Knight’s Armament vertical forward grip, and it was included in order to deal with the problem of the forward rails becoming too cluttered to hold correctly when the other accessories were mounted. It also retained the benefits of recoil control and heat mitigation that made it a popular feature on submachine guns.”⁶ As this article details, forward grips were

⁶ <https://www.luckygunner.com/lounge/how-to-hold-an-ar15-foregrip/> (last visited

developed as a feature for troops charged with fast and efficient killing of enemy combatants in offensive warfare, but in my opinion they are not a necessary feature for self-defense.

20. **Flash Suppressors.** Flash suppressors are devices that are attached to the muzzle of a firearm to reduce or redirect the flash when shooting. This feature is affixed to military rifles to redirect the light (muzzle flash) generated from the burning of gasses while firing which reduces the prevalence of “night blindness” that can develop during low-light firefights. A flash suppressor also disguises the origin of fire and avoids detection by enemy forces but has marginal benefit in civilian self-defense situations, even in low-light conditions. As evidence for the lack of self-defense necessity for this feature, it is widely accepted that the most effective self-defense guns are handguns and home-defense shotguns. These firearms also produce muzzle rise and muzzle flash just like an AR-15 (or other assault rifles) and yet none require a “flash suppressor” to operate effectively in self-defense situations, and I am not aware of any industry authority or advertisement that has ever claimed that such a firearm will not function as designed without such a device. Generally speaking, a “flash” emanates from almost all firearms when fired and if the guns are properly designed for self defense, the cartridge size will be properly paired to the barrel which means

Jan. 10, 2023).

muzzle flash will not be exceptional compared to other firearms that are accepted as the best self defense guns.

21. **Barrel Shroud.** A shroud or handguard is a feature of assault weapons designed to shield the non-trigger hand of the shooter from barrel heat generated during rapid fire. Shrouds generally encircle the barrel beginning at the receiver and then extending down the barrel. The “forend” of a common hunting or target long gun stock is similar in that it is designed for the non-trigger hand of the shooter but on non-military guns the forend generally only “cups” or shields the bottom half of a barrel and does not generally envelop or encircle the entire barrel. These stock forends on target and sporting guns are not referred to as a shroud. In recent years, barrel shrouds on many assault weapons and especially AR-15 derivatives, have evolved to incorporate highly technical attachments systems which allow the shooter to attach various accessories meant to increase the performance and lethality of the weapons. Examples include lights, optical sights and laser aiming devices. In my opinion, shrouds are useful in military operations, especially in offensive battles involving high rates of fire, but they are not a necessary component for self-defense firearms.

22. **Threaded Barrels:** Threaded barrels are firearm barrels that are sometimes slightly lengthened (on most handguns) and modified or “threaded” on the end to accept “suppressors” (on both handguns and rifles). The term

“suppressor” is often used interchangeably with “silencer.” While there is no device that completely silences a gunshot, suppressors are designed to greatly reduce the sound of a gunshot, and modern suppressors are very effective, but not necessary for any gun to function in a self-defense situation.

23. Pistol Braces, Arm Braces, Stabilizing Braces, and Buffer Tubes:

In recent years because of the greatly increased focus on and sales of “AR-15 pistols” these aftermarket parts have gained quick prominence. As discussed earlier, the lack of a stock on these guns is generally a result of firearms manufacturers attempting to comply with the 1934 National Firearms Act (NFA), which regulated short-barreled rifles in response to the organized crime gang murders of the 1930s, many of which were centered in the Chicago, IL area. Those crimes often involved short-barreled firearms such as the Thompson submachine gun. Modern NFA-compliant rifles must not have barrels shorter than 16 inches (SBR or Short Barreled Rifle is the term for rifles that do not comply with the minimum 16-inch NFA requirement). But almost all pistols have barrels shorter than 16 inches, and so many companies produce and sell “AR-15 pistols” which generally appear to be an SBR but without a stock attached and that creates a market for these parts. Firing of these firearms without some sort of “stock” or “stabilizing device” or “pistol brace” is difficult and inaccurate, and hence many manufacturers have developed various forms of stock replacements or stabilizing

braces which in general function as a form of easily-attached stock for the AR-15 pistols. The attachment of these devices to the AR-15 pistols converts the gun into what is potentially a violation of the NFA regulations discussed above. Arm braces function similarly but brace against the forearm instead of shoulder. A buffer tube is a device that extends behind a semi auto receiver to which a stock attachment is often affixed. AR-15 style pistols with pistol brace devices were used in the recent Boulder, CO and Dayton, OH mass shootings.⁷

B. Magazines and Capacity

24. **Detachable Magazines, Large Capacity Magazines, Large Capacity Ammunition Feeding Devices.** Magazines are containers which hold ammunition in spring-loaded preparation for feeding into the receiver of a firearm. Clips, while sometimes confused with magazines, are different and can generally be described as small holding devices that retain cartridges in preparation for faster loading into magazines. Magazines can either be “fixed,” meaning they are integral within the gun, or “detachable,” meaning they are not internally or permanently attached to the firearm. Many firearms, including some of the most revered self-defense firearms ever built, incorporate fixed magazines which means that these containers are permanently affixed to, or inside the firearm. Examples

⁷ Article regarding regulation of the pistol brace devices used in Boulder and Dayton: <https://www.cnn.com/2023/01/13/politics/doj-rule-pistol-stabilizing-braces/index.html> (Last viewed Jan 31, 2023)

include most pump and semiautomatic shotguns where a tubular magazine is affixed under the barrel. Magazines of this sort can be temporarily or permanently “plugged” or shortened to regulate capacity. Many rimfire rifles, including many semiautomatic designs, incorporate the same general fixed tubular magazine design. Most lever action rifles use the same sort of tubular magazine. Many bolt-action hunting rifles utilize a fixed “box magazine” design in which ammunition must be loaded into the permanent “box” below the bolt, and then fed into the receiver from that magazine with each cycle of the bolt.

25. For “fixed magazine” firearms, in order to reload, the shooter must stop shooting and reload the magazine one cartridge at a time before resuming shooting. Conversely, detachable magazines enable a shooter to replace an empty or depleted magazine with a fresh magazine to resume firing in a manner that is much faster than stopping to reload fixed magazines. Unlike fixed magazines, detachable magazines can be preloaded and transported at the ready with the gun, effectively greatly increasing the potential number of rounds fired in any given period of time. For example, a competent shooter with a common fixed-magazine bolt-action rifle may be able to accurately fire 15-20 rounds per minute with long pauses to reload whereas a competent shooter with an AR-15 (either rifle or pistol) and preloaded large capacity magazines can accurately fire more than 100 rounds per minute with very short pauses to change magazines.

26. Detachable magazines may hold as many as 100 or more ammunition rounds but will also function with a single round. It is my experience that magazines which limit capacity to as few as 5 rounds are commonly available and are often legally mandated for hunting in many states. For AR-15s, these magazines function identically in either rifle or pistol versions. It is my experience that even if large capacity magazines are available or sold with firearms today, all firearms companies offer lower capacity options (often 10 round versions to comply with laws in various states).

27. Despite the recent proliferation of large capacity magazines, it is important to note that there is no known firearm that requires a large capacity magazine to function as designed. By this I mean that all firearms that can accept a large capacity magazine can also accept a magazine that holds fewer rounds and still function precisely as intended. This is true even of AR- and AK-platform rifles. Although many of these rifles are sold with a 30 round magazine, the manufacturers all offer the optional purchase of 10 round or even lower capacity magazines and could easily offer magazines limited to almost any given round count. There are many pistols (such as the very popular Model 1911—which was the accepted defensive sidearm of the U.S. Military for decades and is still one of the most widely owned self-defense guns in the United States) that are built for magazines of eight rounds or less. Other widely popular guns such as the Sig P938

are also designed to function with seven or eight round magazines and these guns have been widely acclaimed by dozens of notable firearms industry experts as among the most effective concealed carry/self-defense firearms on the market.⁸ While larger 10-plus round magazines exist for these pistols, a smaller magazine (standard seven or eight round) is considered preferable by almost all consumers because the physical size/profile of the shorter magazine is easier to carry, shoot and conceal.

28. Still today, guns such as the 1911 and Sig938 are built to function with sub-10 round magazines. With regards to the 1911 design, it is so respected that direct copies are currently reproduced by many gun companies (Smith & Wesson, Ruger, Kimber, Springfield, Rock Island, Dan Wesson, and many other companies build and sell these 1911 pistols) and they are sold in high volumes by most retailers in the United States. These guns are still considered extremely effective self-defense firearms by many of the leading firearms trainers in the country and are widely labeled as an “expert’s gun.” For AR-15s and handguns, even where magazines with capacities of more than 10 rounds are prevalent, the industry always offers 10-round or “compliant” magazines as an option. I am not aware of a single case where those magazines have been advertised as inadequate

⁸ USA Carry review of Sig 938 9mm handgun: <https://www.usacarry.com/sig-sauer-p938-subcompact-9mm-review/> (last visited Jan. 10, 2023).

or ineffective, and I am not aware of any other expert or industry advertisement that claims these magazines render a gun defective or unable to function in self-defense situations.

29. **Self-defense and magazine capacity.** Guns such as the Sig 365 which has standard magazine capacity of 10, and the 1911 pistols mentioned above are considered top self-defense choices. Additionally, revolvers have always been considered a top choice for self-defense given their reliability. Revolvers almost always have a 5 or 6 round capacity. Self-defense shotguns function as designed with magazines of 5 or fewer rounds. There are many highly regarded self-defense firearms that are “standard” without high capacity magazines and all semiautomatic guns will function as designed without a high capacity magazine.

30. **Magazines as accessories.** Because a large capacity magazine is not a required component for a firearm to operate, it is characterized as an accessory by the industry. There is a massive market for magazines that far surpasses that of the market for firearms themselves in terms of numeric sales. There are companies, such as Magpul, that entirely specialize in firearms accessories, including large capacity magazines. In fact, most firearms manufacturers do not consider the magazine as integral enough to build their own magazines for their own guns. In almost all cases, even the largest gun manufacturers contract with accessory makers who build magazines and then supply them to the gun

manufacturer, who then sells the magazines with the guns but also as an “add-on” accessory. This is not true of other more integral components such as barrels, triggers and firing pins. Based on my experience, these magazines are a large profit center for the gun industry and sales of these magazines are treated as a category separate from gun sales throughout the sales chain. For example, I am aware of compensation programs from gun manufacturers that offer increased percentage in sales commission payments for sales of magazines as opposed to firearms. Retailers often incentivize their employees to push a buyer to purchase additional magazines because it is known that consumers view the purchase of magazines as separate from the gun and they are therefore viewed as “add-on sales” for retailers.

31. Almost always, these magazines are manufactured by outside contracted suppliers (not the manufacturer of the firearm). The degree to which a magazine is viewed as an accessory by firearms retailers is reinforced by the fact that when manufacturers add additional magazines to the gun at time of sale as an incentive to encourage consumers to purchase the gun, the practice often upsets the retailers who view this as taking away an accessory sale they could have made. Below is a recent promotion from a firearms manufacturer which both advertises magazines as sales incentives and offers 10-round magazine options:

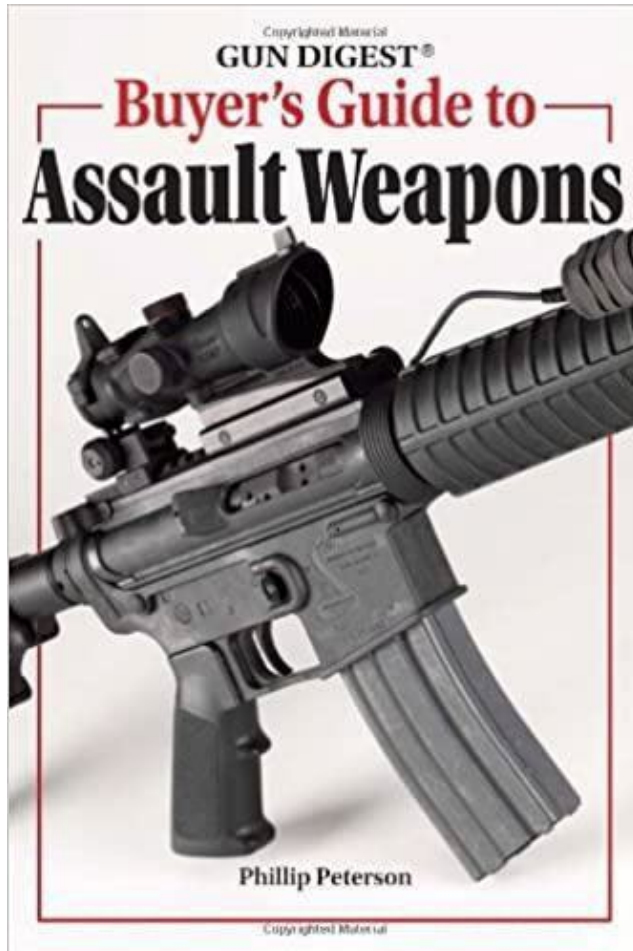


C. History And Marketing of AR-15s and Similar Assault Weapons

32. While there is no universally accepted definition of assault weapon, the term generally refers to a firearm that incorporates a set of physical features that increase the effectiveness of killing enemy combatants in offensive battlefield situations, usually in close and medium-range warfare. This list of features generally includes but is not limited to, the features enumerated in the Hawaii law and includes pistol grips, semi-automatic or fully-automatic fire control systems, the capability to accept detachable magazines, and barrel shrouds.

33. All AR-15 firearms (including all AR-15 pistols) are derivatives of the Armalite Rifle (AR) model 15, which was originally designed for the United States Military in the late 1950s. The AR-15 was specifically designed to satisfy clearly stated military requirements for an assault rifle. The AR-15 incorporated features that achieved these requirements, which included: being lightweight, easily portable, accurate, high-capacity-capable, low recoil, and fast-firing. The AR-15 was therefore adopted by the U.S. military in the early 1960s. The firearms industry openly referred to these and all similar weapons as “assault weapons” and “assault rifles” as late as 2008, as evidenced by this 2008 issue of Gun Digest,

which is commonly accepted in the industry as a prominent authority and advertising venue:⁹



34. One important feature of the AR-15 (and other similar platforms like the AK-47) is the “chambering” or cartridge the rifle is designed to accept. The standard cartridge for the AR-15 is a .223Rem (5.56 is NATO equivalent) which was selected by the military for very specific reasons. While it is commonly

⁹ One of many listings for archived issues of Gun Digest for sale from various resellers: <https://www.amazon.com/Digest-Book-Assault-Weapons-Fifth/dp/087341778X> (last visited Jan 30, 2023).

reported that the AR-15 is a “high power” weapon, the .223 cartridge is not in fact “high power” compared to almost all other hunting rifles that have been sold for more than a century in the United States. As an example, a common .30-06Spfg bolt-action hunting rifle is much more powerful than an AR-15 chambered in .223 when individual shots from each are compared. The .223 (and other similarly sized cartridges common in modern assault rifles) were not chosen because they are “high power” relative to most rifle rounds (although they are more powerful than handgun rounds). Instead, they were chosen for their combination of small size, fast bullet speed, and low recoil impulse, which were all specifically requested in the military requirements. The bullets from these smaller and faster cartridges are very deadly at short and medium ranges. These cartridge characteristics were selected because they result in a rifle that can be high-capacity, accept loaded magazines which are easy to transport, and also be very easy to fire repeatedly while staying on target. The reasoning for the military decision on this chambering is summed up in this article from *Business Insider*: “The smaller rounds weighed less, allowing troops to carry more ammunition into the fight. They also created less recoil, making it easier to level the weapon back onto the target between rounds and making automatic fire easier to manage. Tests showed that troops equipped with smaller 5.56 mm rounds could engage targets more

efficiently and effectively than those firing larger, heavier bullets.”¹⁰ This is why AR-15 and AK-47 platform weapons remain the assault weapon of choice for military operations in short and medium range scenarios where repeated and accurate offensive shooting is desired. These are the same general attributes which appear to be desired by many recent mass shooters in the United States.

35. For AR-15 pistols, the potential bullet velocity of these cartridges is generally decreased due to the shortened barrel. This is true because longer barrels provide more burn time for the propellant (gun powder). Generally speaking, the short barrels of assault pistols do not allow enough time for all powder to burn or propel the bullet. This reduced velocity generally results in a gun that fires a bullet with a muzzle velocity of around 2300-2600 feet per second. This is much faster than most other pistols, but slower than full length rifle versions which generally fire bullets with velocities of 2700-3000 feet per second. This is considered a performance drawback of the guns. However, the increased portability of the pistol versions is considered an advantage in tight spaces such as urban settings and inside buildings. Two notable mass shooting events involving AR-15 pistols

¹⁰ Story on background of AR-15 and chambering history <https://www.businessinsider.com/why-did-us-military-switch-from-762mm-round-to-556mm-2019-9> (last visited on Jan. 27, 2023).

occurred in crowded urban environments. One in a crowd outside a Dayton, OH, bar and one in a grocery store in Boulder, CO.

36. Military versions of the AR-15 are generally capable of “fully automatic” and “burst” rates of fire. These automatic firing modes, which produce multiple shots with one trigger pull, are generally used not to target and kill individual combatants but rather to suppress enemy fire. An article from SOFREP, (a respected digital outlet written and maintained by “former American and US Coalition Military Veterans”) reinforces this truth with this statement: “In combat, automatic weapons are more commonly employed as a means of suppressing enemy movements than they are in actually killing the enemy.”¹¹ Therefore, “semi-automatic” mode is the mode that is most often deployed in battle to efficiently target and kill because it allows targeting of specific human targets with repeated accurate shots rather than inaccurate, indiscriminate “spray.” It is my experience that respected Special Forces trainers therefore teach that “semi-auto” is the preferred and most lethal setting in most wartime scenarios.

37. United States civilian-legal versions of the AR-15 (and other “assault weapons” sold into the U.S. commercial market) are semi-automatic firearms.

¹¹ Article on full auto or semiautomatic from SOFREP <https://sofrep.com/news/how-are-automatic-weapons-actually-used-by-militaries-in-combat/> (Last visited Jan 30 2023).

38. While the AR-15 and its derivatives are by far the most common assault-style weapons in the United States, there are many other firearms that share the same purpose and generally have the same defining features. Those firearms include firearms utilizing all or part of the AK-47 platform as well as many others.

39. The original patent for the gas operating system central to the AR-15 being rapidly fired with minimal recoil expired in 1977,¹² which subsequently allowed the engineering prints for the AR-15 to be publicly available to all firearms companies. From that point forward, there could have been a large-scale, immediate, and legal proliferation of direct copies of these rifles into the United States commercial market. But that did not happen, at least not until nearly two decades later. In fact, when I first started my work in the gun industry in the 1990s, assault weapons, including AR-15s, were not common, and within the gun industry the acceptance or promotion of this product category was thought to be irresponsible and potentially dangerous.

40. This former self-imposed industry “regulation” is evidenced in the commercial sales of AR-15s. During the period between 1964 and 1994, first for Colt, and then also for all companies who produced the guns after Colt’s patent sunset, commercial AR-15 sales averaged fewer than 27,000 units per year for a

¹² Gas Operated Bolt and Carrier System, U.S. Patent No. 2,951,424 (accessible at <https://patents.google.com/patent/US2951424A/en>).

total of about 787,000 units in the 30-year period 1964-1994.¹³ Even during the 10-year period of the federal assault weapons ban (1994-2004), AR-15s were legal to produce and sell as long as they did not incorporate and combine additional features as enumerated in that legislation. Even after that federal legislation expired, the gun industry did not immediately begin producing or selling these guns in large numbers. That is because there was a continued general agreement in the industry that these guns, which were very clearly designed for military-style, offensive (i.e., attacking) use, and related gun paraphernalia—including virtually all large capacity magazines, which were generally also considered to be for military-style, offensive use—would not be displayed at trade shows or used at industry-sponsored shooting events.

41. This voluntary prohibition also extended to the largest sporting goods retailers in the country, almost none of which would sell or display assault weapons or AR-15s or AK-47s in their stores until the mid-2000s. Individuals in the shooting industry were asked not to bring such rifles to industry events or promote them publicly. The NSSF, which administers the main industry trade

¹³ Estimating AR-15 Production, 1964-2017 (Nov. 9, 2019), http://www.alternatewars.com/Politics/Firearms/Count/AR15_Production.htm (last visited Jan. 12, 2023) (compiling data from the Bureau of Alcohol Tobacco, Firearms & Explosives' *Annual Firearms Manufacturing and Export Reports*, among other sources).

show (SHOT show), also severely restricted the display of military and tactical gear or weapons in its own trade show. This remained true as late as 2006. It was not until very recently that the gun industry began to push AR-15s and other assault-style guns, leading to their well-documented proliferation today. The following table of data compiled by the National Shooting Sports Foundation (NSSF), the firearms industry trade group, clearly illustrates that sales of such guns (MSR, AR-15 and AK-47) have increased by 3927% from 1990 until now, despite the fact that no federal, and few state restrictions on such guns existed in 1990.

(74,000 units in 1990 versus 2,798,000 in 2020):¹⁴

Estimated Modern Sporting Rifles in the United States 1990 – 2020

Year	US Production less exports of MSR/AR platform	US Import less exports of MSR/AR, AK platform	ANNUAL TOTAL
1990	43,000	31,000	74,000
1991	46,000	69,000	115,000
1992	33,000	72,000	105,000
1993	62,000	226,000	288,000
1994	103,000	171,000	274,000
1995	54,000	77,000	131,000
1996	27,000	43,000	70,000
1997	44,000	81,000	125,000
1998	70,000	75,000	145,000
1999	113,000	119,000	232,000
2000	86,000	130,000	216,000
2001	60,000	119,000	179,000
2002	97,000	145,000	242,000
2003	118,000	262,000	380,000
2004	107,000	207,000	314,000
2005	141,000	170,000	311,000
2006	196,000	202,000	398,000
2007	269,000	229,000	498,000
2008	444,000	189,000	633,000
2009	692,000	314,000	1,006,000
2010	444,000	140,000	584,000
2011	653,000	163,000	816,000
2012	1,308,000	322,000	1,630,000
2013	1,882,000	393,000	2,275,000
2014	950,000	237,000	1,187,000
2015	1,360,000	245,000	1,605,000
2016	2,217,000	230,000	2,447,000
2017	1,406,000	158,000	1,564,000
2018	1,731,000	225,000	1,956,000
2019	1,679,000	169,000	1,848,000
2020	2,466,000	332,000	2,798,000
TOTALS	18,901,000	5,545,000	24,446,000

Source: ATF AFMER, US ITC, Industry estimates

¹⁴ https://www.nssf.org/wp-content/uploads/2022/07/EstMSR1990_2020.pdf (last visited Jan. 12, 2023).

42. It is my experience that this proliferation is the result of a direct and purposeful industry marketing effort. In 2009 as part of this effort, the firearms industry through the NSSF, facilitated a public re-branding of assault rifles in an effort to make them more socially acceptable. As such, the NSSF broadly encouraged an industry-wide effort to rename such guns “Modern Sporting Rifles” or MSRs. Even though the guns themselves were only steadily “improved” in many functional areas that impact lethality of a military assault rifle, industry members, including me, were then strongly encouraged to stop using the term “assault rifle” or even “tactical rifle” because those terms were thought a too-transparent label that referenced offensive military assaults which would therefore harm the public perception of such guns and decrease the sales of companies that build them. Despite the fact that well into the 2000s, almost everyone in the industry used the terms assault weapon and assault rifle, NSSF purposefully sought to reframe the origin of this terminology and distance the firearms industry from it with statements that are still on the NSSF marketing material and website yet today: “If someone calls an AR-15 or other semi-automatic rifle an ‘assault weapon,’ he or she either supports banning these firearms or does not understand their function and sporting use, or both. Please correct them. ‘Assault weapon’ is a political term created by California anti-gun legislators to ban some semi-automatic rifles there in the 1980s.”¹⁵

43. While assault pistols are technically separate and therefore not considered “MSRs”, they are built on the same platforms, generally marketed in the same way, and most are generally considered to be AR-15s. The emergence of AR-15 pistols onto the market is relatively new and until recently seemed to many gun buyers as a “bad joke.”¹⁶ However, recent increases in the models offered and in marketing of these guns has resulted in these AR-15 pistols becoming an accepted part of most AR-15 product lines.

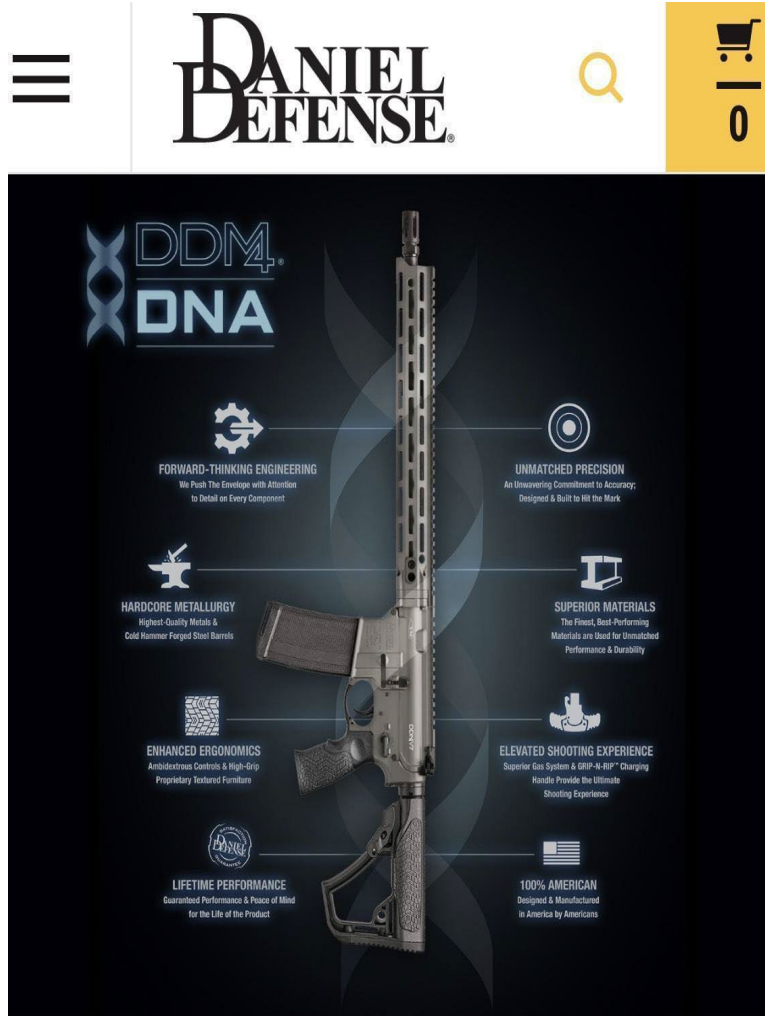
44. During the late 2000s and continuing through today, there has been a rapid increase in the number of companies that manufacture and market their own versions of AR-15s and other similar assault rifles. This has resulted in a transformation of the marketplace from only a few AR-15 manufacturers in 2000, to several hundred AR-15/assault weapon companies today. The list of AR-15 manufacturers now includes small, medium, and the largest firearms companies in the United States, all of whom are striving to obtain market share with derivatives of what is effectively the same rifle. This reality has created a highly competitive market resulting in thousands of “continuous improvements” in the AR-15-style firearms sold to the general public as a way to encourage consumers to buy one

¹⁵ NSSF MSR marketing webpage <https://www.nssf.org/msr/> (last visited Jan 20, 2023).

¹⁶ Article on the recent acceptance and change for AR-15 pistols <https://medium.com/war-is-boring/the-ar-15-pistol-seemed-like-a-bad-joke-at-first-77d9dad71022> (last visited Jan 31, 2023).

rifle over another. Over time, these improvements have generally been incorporated on most rifles across the marketplace and therefore result in firearms that are almost universally more accurate, more portable, and more specifically tailored to produce lethal outcomes. Relative to the AR-15 assault rifles requested and then adopted by the U.S. military, the commercially available AR-15s of today are more reliable, more accurate, more ergonomic, and therefore more effective. This trend of “improvement” continues and is aggressively advertised each day by dozens of firearms companies. For example, this is a typical marketing page¹⁷ for an AR-15 manufacturer in which a prominent company advertises the various ways in which its features “improve” upon the basic AR-15:

¹⁷ <https://danieldefense.com/daniel-dna> (last visited Jan. 10, 2023).



45. The increase in the AR-15 market has also facilitated an increase in accessory availability for the AR-15 and similar firearms (commonly referred to as “furniture”). Most AR-15s and similar firearms now incorporate features designed

to accept one or more of dozens of accessories, all of which are designed and marketed to increase the effectiveness of the rifle in live-fire situations. The list of accessories includes highly-effective electronic optics, more sensitive triggers, devices such as bump stocks and modified trigger systems which convert guns to near-fully-automatic rates of fire, forward and pistol grip options, tactical lights, laser-pointing devices, high-capacity magazines, and many others. Almost none of these accessories were available to the United States military at the time of the rifle's adoption in the early 1960s, and in many cases U.S. civilians can now outfit rifles in a manner more lethal than the rifles carried by the military. There are now hundreds of companies and retailers who encourage customers to make their rifles more effective by accessorizing. The following are examples of industry marketing efforts which illustrate this trend. Most all accessories are sold and are applicable for AR-15 pistols as well as rifles:¹⁸

¹⁸ AR-15 accessory article examples: <https://www.tactical-life.com/gear/top-10-black-guns-ar-accessories/> (last visited Jan. 10, 2023), and <https://www.pewpewtactical.com/best-ar-15-furniture-accessories/> (last visited Jan. 10, 2023).



Top 10 Black Guns AR Accessories

by Tactical-Life — January 4, 2015

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Top 10 Black Gun AR Accessories

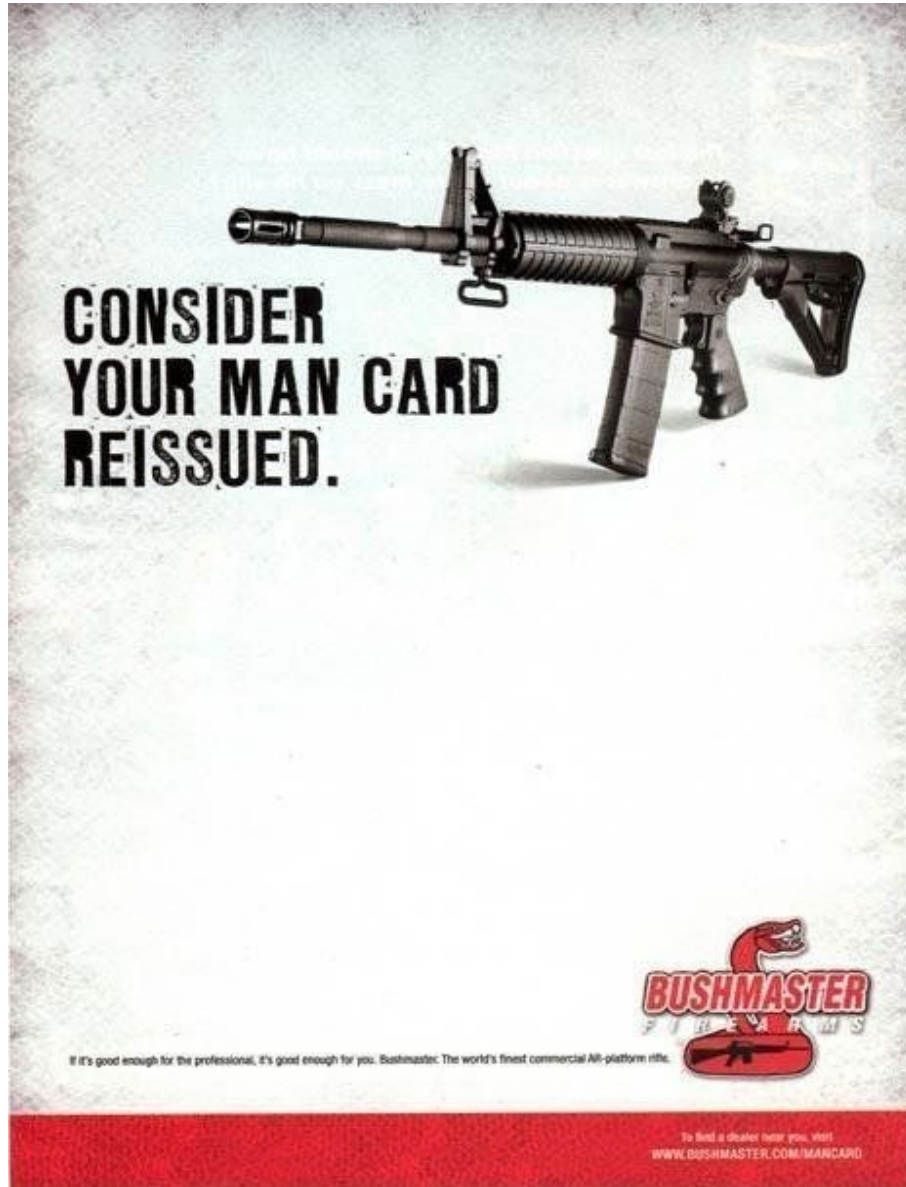


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46. The competitive AR-15/assault weapon marketplace has also resulted in manufacturers seeking to create new customers through professional, targeted marketing campaigns. Most of these campaigns overtly target young American males, such as this example from 2010:



The gun advertised in this campaign (Bushmaster XM15 rifle) has been used by young men in notable mass shootings, including those in Sandy Hook, CT and

Buffalo, NY and Bushmaster offers a pistol version of their AR-15.¹⁹

47. Other prevalent AR-15 marketing encourages potential customers to buy and deploy the same weaponry as elite Special Forces units of the U.S. military. It is my experience that most of these customers are young men. In other words, marketing within the firearms industry admits to, and capitalizes on, the AR-15-style weapons as a military weapon sold to young men, as in this example:



¹⁹ Bushmaster XM15 Mancard advertising article: <https://www.ammoland.com/2010/05/bushmaster-man-card/#axzz7q0HQao58> (last visited Jan. 10, 2023).

Daniel Defense AR-15 pistol version:



Daniel Defense sells a pistol version of this gun and a version of the Daniel Defense AR-15 was featured in the Modern Warfare²⁰ video game and used in the Uvalde, TX shooting.²¹

48. Smith and Wesson's AR-15 variant is now widely reported to be the best-selling AR-15 in the United States and the company offers the gun in both pistol and rifle variants. These guns have been used in notable mass shootings including in the Parkland, Florida school shooting and in the Highland Park, IL July 4th parade shooting. Smith and Wesson's primary customers for this rifle are U.S. civilians who are generally not trained in military or police tactics nor monitored by military safety protocols, but the company's chosen name for this

²⁰ One of many youtube captures of the DDM4 Daniel Defense rifle in Modern Warfare: https://www.youtube.com/watch?v=KM_sdzKGKv0 (last visited Jan. 30, 2023).

²¹ Michael Daly, *Uvalde Shooter's Gunmaker Hypes 'Revolutionary' New Killing Machine*, <https://www.thedailybeast.com/uvalde-shooter-salvador-ramos-gunmaker-daniel-defense-hypes-revolutionary-new-killing-machine> (last visited Jan. 10, 2023) (showing Daniel Defense advertisement).

rifle—the M&P15, which means “Military and Police AR-15”—suggests buyers will be equipped with the same rifles as trained military and police units.²²



Smith and Wesson Military and Police Pistol Version:



²² <https://www.smith-wesson.com/product/mp-15-sport-ii> (last visited Jan. 10, 2023).

49. An increasing number of smaller AR-15 manufacturers often seek to grow their market by advertising in ways that depict young men inciting or engaging in armed urban warfare, such as in this recent example from AR-15 maker Spike's Tactical which offers their AR-15s in several pistol versions, and encourages men to deploy their AR-15s in armed conflict across the United States:²³



Spike Tactical “Pipe Hitter Union” AR-15 pistol:



50. Other AR-15 manufacturers now often seek to spur sales by depicting men deploying their personal AR-15s in self-appointed armed vigilante actions, such as this advertising image supplied by the AR-15 maker Patriot Ordnance Factory, which also offers many AR-15 pistol options along with their AR-15 rifles:²⁴



POF-USA Renegade AR-15 Pistol:



²⁴ <https://pof-usa.com/wallpapers/> (last visited Jan. 10, 2023).

51. Some prominent AR-15 companies design and market their models with specific suggested uses that bear obvious similarities to mass shooting events that have happened in U.S. urban environments such as the Pulse Nightclub, Las Vegas Concert Shooting, and the El Paso Walmart shooting. This is one relevant example from AR-15 maker Wilson Combat which offers both pistol and rifle versions of their AR-15:²⁵



Wilson Arms AR-15 Pistol:



52. There are many AR-15 companies that combine the trends of continuous improvement, accessorization, and modern digital marketing to encourage potential customers to personalize and optimize their rifles through an

²⁵ <https://www.wilsoncombat.com/ar-calibers/224-valkyrie/super-sniper/> (last visited Jan. 10, 2023).

online ordering process. Below is one such example.²⁶ The official corporate name of this manufacturer further suggests the preferred use of their AR-15s is from “rooftops,” which is precisely how the shooter during the July 4th Highland Park, IL parade deployed his AR-15 rifle and large capacity magazines. On the same website offering Rooftop Arms AR-15 pistols, the company proclaims: “If you can dream it, we can build it.”.



²⁶ <https://rooftoparms.com/> (last visited Jan. 10, 2023).

Rooftop Arms AR-15 Pistol:



53. In my experience, many individuals and companies in the firearms industry who once imposed reasonable self-restraint regarding sales and marketing practices now operate under the belief that the Protection in Lawful Commerce in Arms Act (PLCAA),²⁷ which became law in 2005, provides a liability shield for product development, sales and marketing efforts. It is also my experience that the AR-15/assault weapon marketing as detailed in the examples above has increased in frequency and become much more explicit since PLCAA enactment.

²⁷ 15 U.S.C. §§ 7901–7903.

I declare under penalty of perjury that the foregoing is true and correct.

DATED: Kalispell, Montana, February 14, 2023.



RYAN BUSSE